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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,096	01/24/2002	Kevin R. Boyle	GB 010021	9447

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BRIARCLIFF MANOR, NY 10510

EXAMINER

PAN, YUWEN

ART UNIT PAPER NUMBER

2682

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,096

Applicant(s)

BOYLE ET AL.

Examiner

Yuwen Pan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed 12/16/04 have been fully considered but they are not persuasive. The applicant argues that claim 1 of this application and claim 1 of the co-pending application have been amended in a manner which is believed to obviate the provisional obviousness-type double patenting rejection. The examiner respectfully disagrees because both applications claim an antenna attach to a housing of a wireless terminal. Although application 09/912,470 further incorporates that a change in the predetermined dimensions of the ground conductor housing results in a change in the bandwidth of said wireless terminal, the added limitation is merely the inherence of the physical meaning of antenna with the terminal housing structure. One ordinary skill in the art knows that the dimension, length or distance between two conductors which are forming an antenna directly affect the frequency response of wireless terminal. Therefore, the previous provisional obviousness-type double patenting rejection stands.

DETAILED ACTION

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 5 of copending Application No. 09/912470. Although the conflicting claims are not identical, they are not patentably distinct from each other because the referenced copending application and the instant application are claiming common subject matter, as follows: a wireless terminal comprising a ground conductor and a transceiver coupled to an antenna feed, wherein the antenna feed is coupled directly to the ground conductor via a capacitor formed by a conducting plate and a portion of the ground conductor and a slot is provided in the ground conductor.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nghiem (US006114996A) in view of Hall (U.S. Patent # 4,587,524).

Per claim 1, Nghiem discloses a wireless terminal (column 1 and lines 47-50) comprising: a ground conductor and a transceiver housed by said ground conductor housing and coupled to an antenna feed (figure 1 and 3, column 5 and line 54-column 6 and line 15), wherein the antenna

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feed is coupled directly to the ground conductor via a capacitor formed by a conducting plate and a portion of the ground conductor (figure 3). Nghiem doesn't teach that said slot is partially located underneath the conducting plate. Hall teaches that the conducting plate is big enough to cover part of the slot (see figure 3 and column 3 and lines 25-40). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Hall with Nghiem's apparatus such that the impedance and cardioids radiation characteristics over a wide bandwidth is maintained (see Hall, column 2 and lines 37-45).

Per claim 4, Hall further teaches that a further slot, also partially located underneath the conducting plate, is provided in the ground conductor (see figure 3 and item 42).

Per claim 6, Nghiem teach that the ground conductor is a handset case (see figure 1 and 3).

Per claim 7, Nghiem further teaches that the ground conductor is a printed circuit board ground plane (figure 3, column 5 and lines 27-39).

Per claim 8, Nghiem further teaches that a matching network is provided between the transceiver and the antenna feed (see column 6 and lines 1-15).

7. Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nghiem (US006114996A) and Hall (U.S. Patent # 4,587,524) as applied to claim 1 above, and further in view of Engblom et al (US006002367A).

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Per claim 2, combination of Nghiem and Hall doesn't teach that slot is parallel to the major axis of the terminal Engblom further teaches that slot is parallel to the major axis of the terminal (see figure 1). Engblom teaches that a slot is provided in the ground conductor (see figure 10B and item 5, column 2 and lines 52-53). It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Engblom with Nghiem's device such that it would improve the increasing bandwidth and matching feature.

Per claim 3, Engblom further teaches that slot is folded (see figure 10B and item 5).

Per claim 5, Engblom further teaches that the conducting plate is asymmetrical with respect to the major axis of the ground conductor (see figure 10B).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 703-305-7372. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Yuwen Pan
April 11, 2005


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600